

Appln No. 10/629,505
Amdt date June 6, 2005
Reply to Office action of March 4, 2005

REMARKS/ARGUMENTS

In the Office action mailed March 4, 2005, claims 1-46 were pending in the application, claims 1-13, 15, 20-26, 32-37 and 39-46 were rejected, and claims 14, 16-19, 27-31 and 38 were objected to as depending on a rejected base claim. In addition, Applicant was reminded of the proper language and format for an Abstract of the Disclosure, and claims 12 and 15 were objected to.

Claims 1, 2, 13, 14, 16, 17, 20, 26, 27, and 38 are now amended. Claims 8-12, 21-25, 32-37, and 39-46 are now cancelled. Claims 47-52 are new.

Turning first to objected to claims 14, 16-19, 27-31 and 38, these claims were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. (It is noted that paragraph 53 of the Detailed Action appears to include a typographical error, stating that the objected to claims are claims 14, 16-9, 27-31 and 38.) Claims 14, 16, 18, 27 and 38 are now rewritten in independent form including all the limitations of the base claim and any intervening claims. Claims 18-19 and 28-31 are dependent on claim 17 and 27, respectively. Accordingly, claims 14, 16-19, 27-31 and 38 are now allowable.

The Abstract of the Disclosure is now amended in view of the reminder in the Office action.

Claim 1 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,473,553 to Jerman et al. ("Jerman"). In Jerman a magneto-optical (MO) head 110 includes

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a slider body 112 and an optical mounting block 111. German, col. 4, lines 11-19; see also German, Fig. 1A. The MO head 110 includes a dynamic mirror 118. German, col. 5, lines 1-2. It does not appear that the dynamic mirror 118 is mounted to the mounting block 111. Compare German Figs. 1A-C and Figs. 5-7.

Claim 1, however, specifies "providing a plurality of optical components including a light source and an adjustable optical element" and "joining, in fixed positions, said plurality of optical components to said base substrate". It does not appear that German discloses or suggests such, and accordingly claim 1 is allowable. Claims 2-7, 13, 15, 26, dependent ultimately on claim 1, are also allowable.

Claim 47 is new. Claim 47 specifies "joining said optical components to said base substrate such that said light source remains optically aligned to said further of said optical components". Claim 47 further specifies "wherein said joining comprises heating said solder layer along with said base, said optical components, and said jig and subsequently cooling said solder layer along with said base, said optical components, and said jig, and said jig moves relative to said optical components thereby preventing said joined optical components from binding to the jig during said cooling." See, e.g., application as filed, p. 7, lines 7-19. It is noted that in German, "[a]fter the components are adjusted properly in place and the optical circuit is tuned, the components can be glued in place using an epoxy or other material so that they [sic] components will not fall out of adjustment." German, col. 4, lines 56-60. Accordingly, it is believed that claim 47 is allowable.

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New claim 48 specifies "providing a plurality of optical components including a light source and an adjustable optical element." Claim 48 further specifies "joining said plurality of optical components to said base substrate". Claim 48 still further specifies "adjusting said adjustable optical element such that optical power of light emitted by said light source and directed into said optical transmission medium is maximized, thereby accounting for imperfections in the passive alignment of said optical subassembly to said optical transmission medium. See, e.g., application as filed, p. 7, line 28 to p. 8, line 4.

As discussed with respect to claim 1, it does not appear that Jerman discloses joining a plurality of optical components, including an adjustable optical element, to a base substrate. In addition, it does not appear that Jerman discloses or suggests adjusting said adjustable optical elements such that optical power of light emitted by said light source and directed into said optical transmission medium is maximized, thereby accounting for imperfections in the passive alignment of said optical subassembly to said optical transmission medium. Accordingly, claim 48 is allowable, as is dependent claim 49.

Claim 50 specifies "placing a metal jig stencil over a base substrate, the metal jig stencil and the base substrate having different coefficients of thermal expansion." Claim 50 also specifies "the jig stencil having a plurality of holes therethrough, ..., with at least one of the holes having a laser therein and at least one other of the holes having an adjustable mirror therein." Claim 50 further specifies "joining the optical components to the base substrate in fixed positions to

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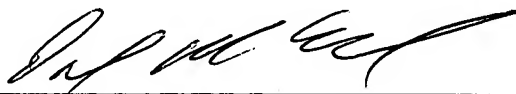
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form an optical subassembly; passively aligning the optical subassembly to an optical fiber; and adjusting the adjustable mirror to maximize the amount of light emitted from the laser reaching the optical fiber." It does not appear that Jerman discloses or suggests such, including, e.g., the use of a metal jig stencil over a base substrate, the metal jig stencil and the base substrate having different coefficients of thermal expansion, and the laser and adjustable mirror fixed to the base substrate. Accordingly, claim 50 is further allowable. Claims 51 and 52, depending on claim 50, are also allowable.

Accordingly, the application is in condition for allowance and allowance of same is respectfully requested.

Respectfully submitted,

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